

**REQUEST FOR COMMENT ON SCOPE OF  
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT  
FOR THE  
AMENDED BUCKHORN MOUNTAIN PROJECT**

**Scoping Re-Initiated:** On September 5, 2003, the Washington State Department of Ecology (Ecology) and the U.S. Department of Agriculture, Forest Service (FS), released a request for comments regarding the scope of the Supplemental Environmental Impact Statement (SEIS) to address the Buckhorn Mountain Project proposal. Subsequent to the completion of that scoping process, Ecology and FS received an Amended Plan of Operations from the applicant, Crown Resources Corporation, dated February 9, 2004. After review and evaluation of the Amended Plan of Operations, Ecology and FS determined that the amended proposal differs sufficiently from the original proposal with respect to its milling and tailings disposal provisions to warrant re-initiation of the scoping process.

***Note:** All comments received during the scoping process on the original proposal (September 5, 2003 through December 4, 2003) will be considered by Ecology and FS in the development of the scope of the SEIS.*

**Request for Comments:** Ecology and FS are requesting comments regarding the scope of the Supplemental Environmental Impact Statement (SEIS) to address the amended Buckhorn Mountain Project proposal. The SEIS will be a combined National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) document and will supplement the Final Environmental Impact Statement (FEIS) for Crown Jewel Mine (January 1997) prepared for a previous mining proposal on Buckhorn Mountain. The SEIS will fulfill and be consistent with all applicable laws, rules, and regulations, and the 1989 Okanogan National Forest Land and Resource Management Plan, as amended.

***Note:** There is no requirement or need for parties to resubmit comments that were submitted during the previous scoping process (September 5, 2003 through December 4, 2003).*

**Description of Proposal:** The amended Buckhorn Mountain Project proposal involves the development of an underground gold mine in Okanogan County, Washington; transportation of the mined ore by truck to the Echo Bay Mineral Corporation's (a wholly owned subsidiary of the Kinross Corporation) Kettle River Mill located near Republic in Ferry County; and ore milling and tailings disposal at the Kettle River Mill (See Figure 1).

The original proposal involved development of a new milling and tailings disposal facility at the Dry Gulch site near Chesaw in Okanogan County. The development of a new facility is no longer an element of the Amended Plan of Operations; although it may continue to be evaluated as an alternative to the Kettle River Mill for the milling and tailings disposal elements of the project.

The proponent's Amended Plan of Operations may be viewed on-line at:  
<http://www.fs.fed.us/r6/okanogan/> (click on Bulletin Board). The project proposal is described in more detail below in the Background section.

**Proponent:** Crown Resources Corporation

**Location of Proposal:** The Buckhorn Mountain Project proposal consists of development of an underground gold mine on Buckhorn Mountain approximately 3.5 air miles east of Chesaw, Washington, in Sections 24 and 25, Township 40 N., Range 30 E., W.M. The affected portion of

Buckhorn Mountain is located approximately 21 miles east of Oroville, Washington, and 3.5 miles south of the Canadian border (See Figure 2).

Milling of ore and tailings disposal would occur at the Kinross Corporation's Kettle River Mill located approximately eight miles east of Republic, Washington, in Section 26, Township 37 N., Range 33 E., W.M.

The proposal also identifies a quarry that is intended to be used as a source of backfill materials for the mine. The quarry is located approximately one mile west of Curlew on the south side of West Kettle River Road in Sections 14 and 15, Township 39 N., Range 33 E., W.M. (See Figure 3).

**Lead and Cooperating Agencies:** Ecology and the FS will be joint lead agencies in accordance with 40 CFR 1501.5 (b), and are responsible for preparation of the SEIS. The Washington State Department of Natural Resources will be a cooperating agency in accordance with 40 CFR 1501.6. Additional cooperating agencies may be identified as the project proceeds.

**Possible Alternatives:** The Crown Jewel Mine FEIS analyzed a reasonable range of alternatives. Some aspects of the new underground mine proposal differ from the underground mine alternative presented in the Crown Jewel Mine FEIS, although a number of components remain the same. Because a reasonable range of alternatives was established in the preceding FEIS, additional alternatives will be limited to alternative components to the underground mining/milling/tailings disposal/supply and haul route operations proposed by Crown Resources Corporation and will be based on the response to scoping.

**Preliminary Issues Identified by the FS:** A number of issues were identified in the Crown Jewel Mine FEIS. The major issues identified concerned water quality and quantity, wildlife habitat impacts, increased traffic, the use of toxic materials, extraction impacts, potential for spills, the effects on the visual quality of the area, and social/economic impacts. Similar issues are proposed to be addressed in the SEIS.

**Preliminary Issues Identified by Ecology:** In addition to the preliminary issues identified by the FS, Ecology has identified the following areas for discussion in the SEIS:

PROJECT ELEMENT	AREAS OF DISCUSSION
Underground mine and associated surface facilities	<ul style="list-style-type: none"> <li>• Surface and ground water quality, earth, air quality, plants and animals, scenic resources, noise, land use, aesthetics, recreation, and public services and utilities impacts</li> <li>• Potential for alterations to ground water divide and surface water flow regime</li> <li>• Evaluation of tailing paste backfill feasibility</li> <li>• Risk of spills/spill prevention and response</li> <li>• Alternatives for supplying energy to the mine and milling facility</li> <li>• Water needed for mining operation</li> <li>• Water right mitigation measures</li> </ul>
Mill and tailings disposal	<ul style="list-style-type: none"> <li>• Surface and ground water quality, earth, air quality, plants and animals, noise, land use, and public services and utilities impacts</li> <li>• Water needed for milling operation</li> <li>• Alternatives for tailings disposal</li> <li>• Risk of spills/spill prevention and response</li> <li>• Consistency of expansion proposal with Chapter 78.56 RCW (Metals Mining and Milling Operations Act)</li> </ul>
Mining of backfill materials	<ul style="list-style-type: none"> <li>• Ground water quality, earth, air quality, plants and animals, noise, land use, and public services impacts</li> </ul>
Supply and haul routes	<ul style="list-style-type: none"> <li>• Surface and ground water quality, earth, air quality, plants and animals, scenic resources, noise, land use, aesthetics, recreation, and public services impacts</li> <li>• Risk of spills/spill prevention and response</li> <li>• Alternatives for conveying ore from the mine to the milling facility</li> <li>• Wear and tear on existing roads</li> </ul>

**Scoping:** Agencies, affected tribes, organizations, and members of the public are invited to comment on the scope of the SEIS. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required. **The comment period will open on April 2, 2004 and close on May 17, 2004.**

Ecology and FS have identified a single point of contact for receiving comments on the scope of the SEIS. Comments may be submitted in writing to:

Derek Sandison  
 Department of Ecology  
 15 W. Yakima Ave., Suite 200  
 Yakima, WA 98902  
 e-mail: [dsan461@ecy.wa.gov](mailto:dsan461@ecy.wa.gov)

**Open House:** Ecology and FS are co-sponsoring an open house to provide the public information on the Amended Buckhorn Mountain Project. Ecology and FS staff will be available to answer questions about NEPA, SEPA, and environmental permits associated with evaluation of the proposal, as well as to take comments on the scope of the SEIS. The open house will be held at the Republic Elementary School, located at 30306 E. Hwy 20, on April 22, 2004, from 5:00 – 7:30 P.M.

## **BACKGROUND**

**Proposed Action:** The proposed action is to prepare a Supplemental Environmental Impact Statement (SEIS) for the Buckhorn Mountain Project proposal as described in the February 9, 2004, Amended Plan of Operation. The proposal would consist of an underground mine and associated surface facilities on private lands and on public lands administered by the Forest Service (See Figure 4). Milling of the extracted ore and tailings disposal would be accomplished at the Echo Bay Mineral Corporation's Kettle River Mill located near Republic in Ferry County, Washington.

The proposed mine would result in 31 acres of disturbed area surrounding fenced surface facilities above the ore deposit. There will be up to 55 acres of additional disturbance related to haul roads for the project. Approximately 8 months of underground development work is required prior to initial ore production. The 88,000 tons of development rock generated during this initial period would be temporarily staged on the ground surface until returned underground as backfill. Construction of the administrative office and other associated surface facilities would occur concurrently. Full-scale production of fifteen hundred tons of ore per day is likely to begin twelve months after project initiation. Commercial production is projected to continue for approximately 90 months (7.5 years). Active physical decommissioning of site facilities would continue for approximately 2 additional years upon mining cessation, followed by three to five years of reclamation monitoring and final closure.

The majority of underground mine openings would be backfilled upon completion of mining. The backfill would consist of development rock from the mine and gravel excavated from existing mines and/or a new gravel mine or mines. The Amended Plan of Operations identifies a large quarry site located about one mile west of Curlew as a significant source of backfill materials. Backfill will consist of approximately 900,000 cubic yards of uncemented materials and 700,000 cubic yards of materials with a cement additive.

The proposed supply route to the mine would extend from the city of Oroville east on Oroville-Toroda Creek Road through the community of Chesaw, then continue on Pontiac Ridge Road to FS Road 120. Approximately one mile of new road would be constructed to connect FS Road 120 to the proposed mine site (See Figure 5).

Mineral ore extracted from the mine would be hauled to the Kettle River Mill and tailings disposal facility by road in highway-legal trucks. The haul route would be approximately 47 miles in length and would traverse a combination of FS roads, county roads and state highways. Approximately three miles of new road would need to be constructed to connect the mine with FS Road 3550 (Marias Creek Road). The haul route would follow FS Road 3550 east to its intersection with Toroda Creek Road (See Figure 6). The Amended Plan of Operations identifies the following three alternative routes to connect the mine with Toroda Creek Road:

- 1) FS Road 120 south to Pontiac Ridge Road then east to Toroda Creek Road on Oroville Toroda Creek (Beaver Lake) Road (Labeled as Alternative Route A on Figure 5);
- 2) FS Road 120 south to Pontiac Ridge Road then east to Toroda Creek Road on Pontiac Ridge Road (Labeled as Alternative Route B on Figure 5); and
- 3) FS Road 120 north to FS Road 100 then east to Toroda Creek Road on FS Road 3575 (Nicholson Creek Road) (Labeled as Alternative Route D on Figure 5).

The haul route would extend north on Toroda Creek Road, then east on West Kettle River Road to its intersection with State Route (SR) 21 near the community of Curlew. The route would follow SR 21 south through the community of Malo to its intersection with Cook Mountain Road. The route would continue eastbound on Cook Mountain Road, then turn on Jack May's Road, and then on to Fish Hatchery Road where it would enter the existing mill and tailings disposal site. On their return trip from the mill to the mine, haul trucks would transport backfill from the gravel quarry near Curlew (described above) to the mine site.

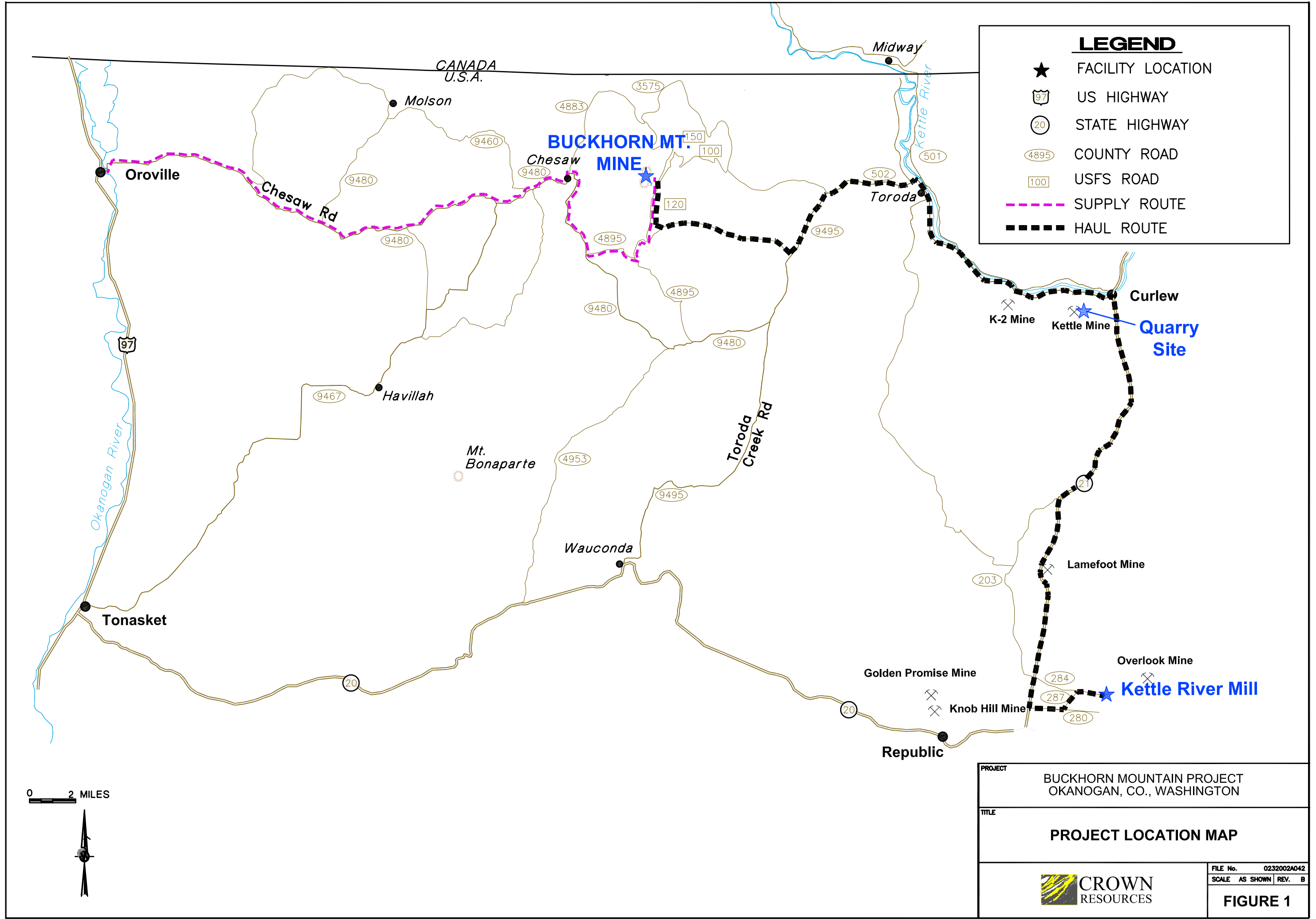
The mill and tailings disposal site are approximately four miles east of SR 21 and eight miles east of Republic. The key steps in the milling process will include ore crushing and grinding, carbon in-leach precious mineral extraction, cyanide detoxification and disposal of tailings, and gold and silver recovery. In order to accommodate ore from the Buckhorn mine, the tailings disposal facility at the Kettle River Mill would need to be expanded. The amended proposal calls for increasing the height of the existing tailings impoundment to maintain the expansion within the disposal facility's current footprint (See Figure 7).

Under the amended proposal, about 100 employees would be employed at the mine at the peak of initial construction activities and 120 employees at full mine operation. Approximately 30 employees would be employed for ore hauling activities, while about 40 employees would be employed at the milling and tailings facility.

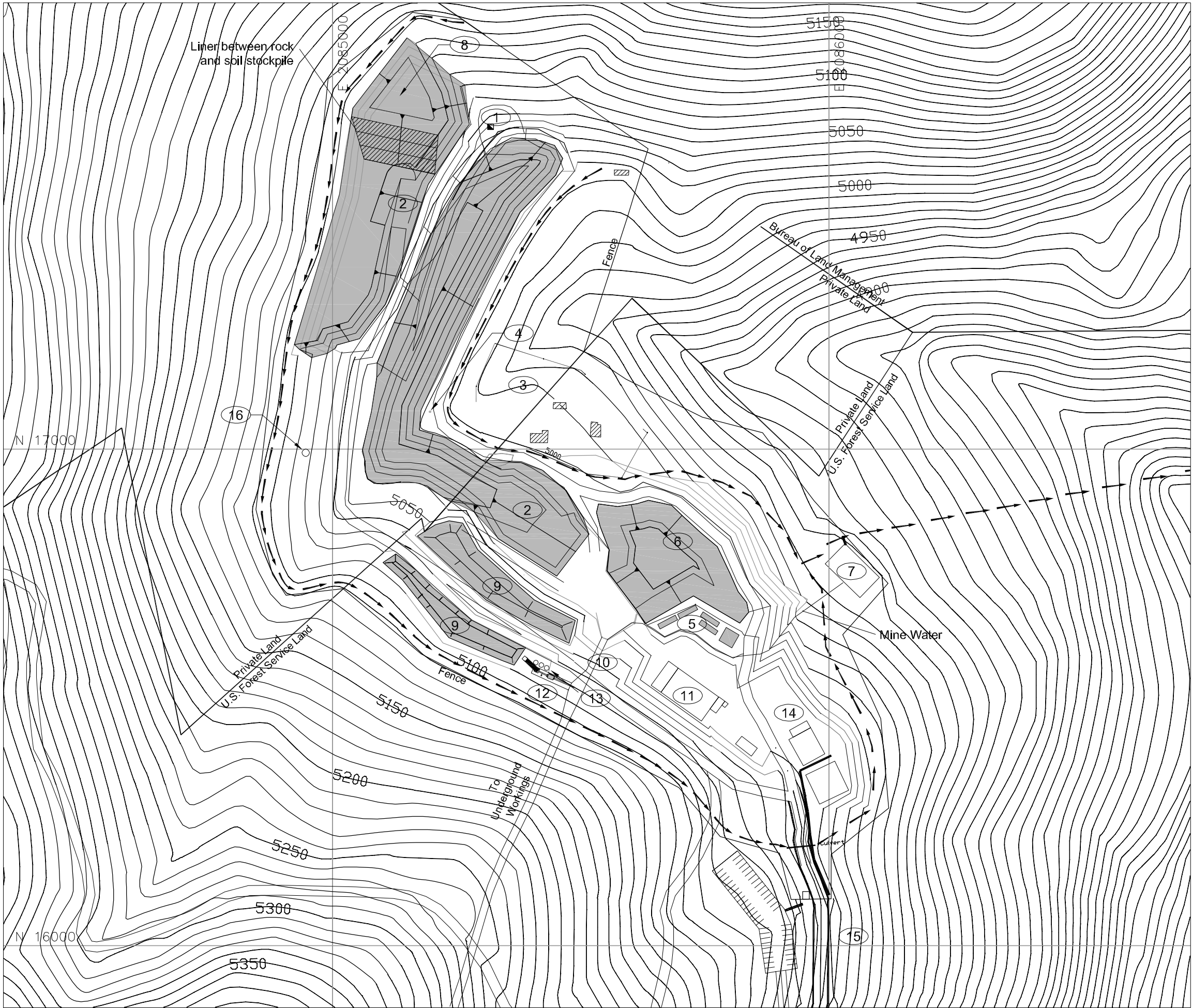
All project activities must be in compliance Chapter 78.56 RCW (Metals Mining and Milling Operations) and Chapter 78.44 RCW (Surface Mining). A reclamation plan that meets the standard of Chapter 78.44 RCW will be required for any surface mining of sands and gravels associated with the project.

**Purpose and Need:** The purpose and need for the SEIS is to respond to the Amended Plan of Operations and other permit applications submitted by the proponent to construct and operate a mine in the specific ore body on Buckhorn Mountain, along with use of existing processing and tailings disposal facilities that differ from those described in the underground mine proposal evaluated in the Crown Jewel Mine Final Environmental Impact Statement, while protecting surface resources. The Okanogan National Forest Land and Resource Management Plan and the 1872 Mining Law recognize that claimants are entitled to access to their mining claims, with reasonable mitigation measures and/or operating requirements.

The SEIS will include analysis of probable environmental impacts of the amended proposal and identification of mitigation measures and monitoring requirements for reclamation, spill prevention/emergency response, water quality, water quantity, erosion and sediment control, air quality, wildlife impacts and protection, and public safety as well as for other issues and concerns.



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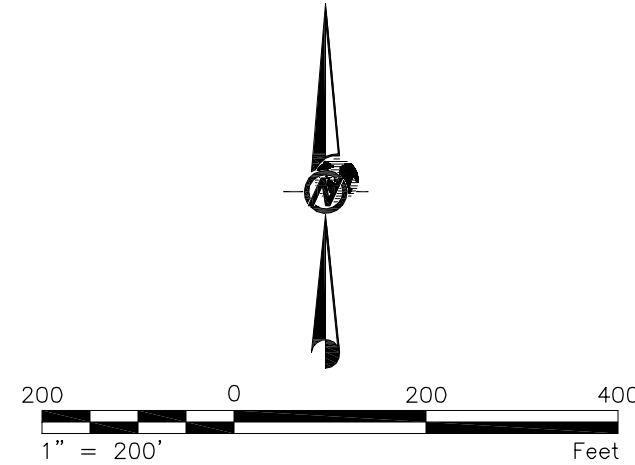


# LEGEND

- PROPERTY LINES
- PROPOSED ROADS
- EXISTING ROADS
- STORMWATER DIVERSION FLOW
- CULTURAL RESOURCE
- SECURITY FENCE

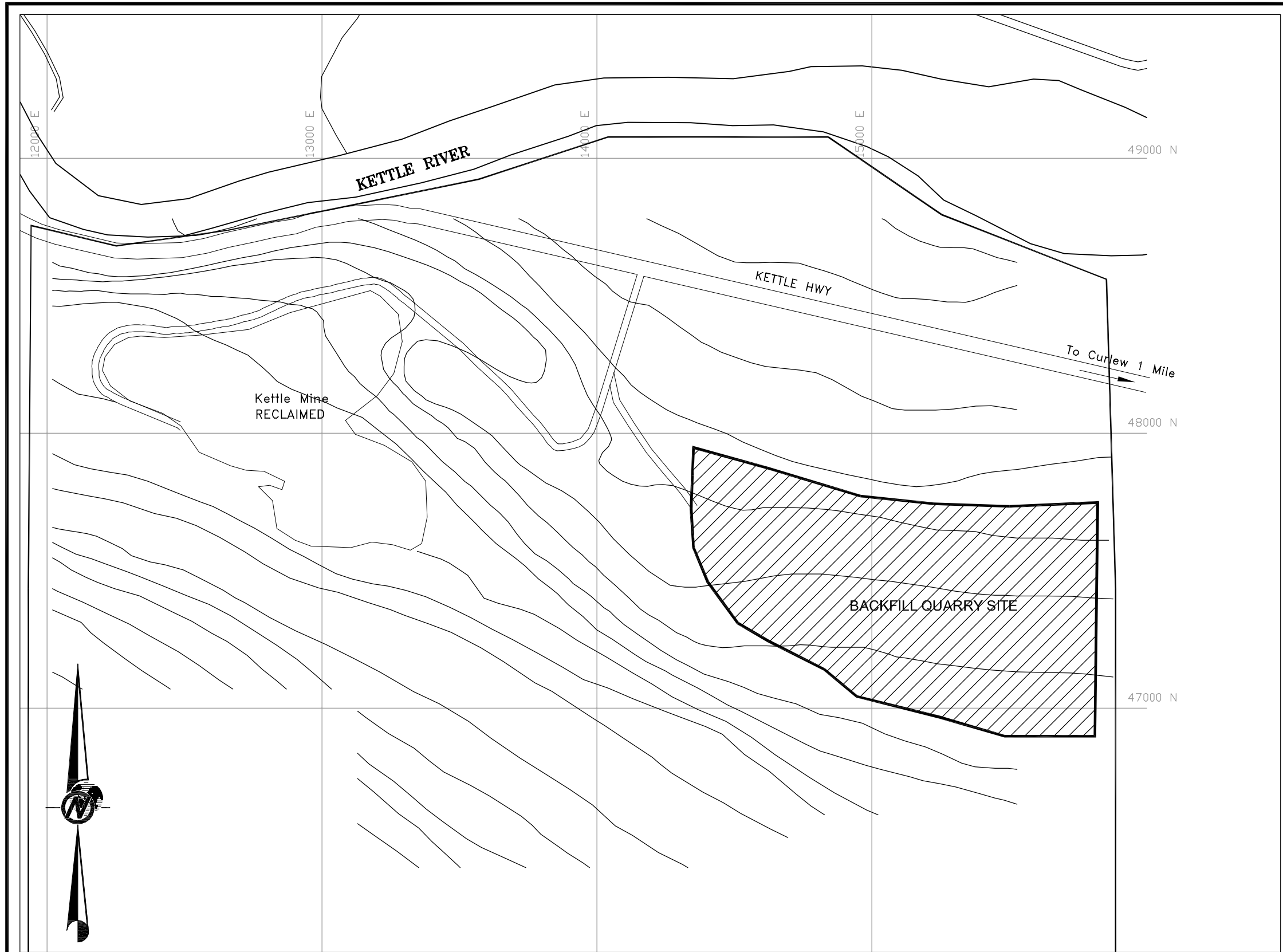
ID. NUMBER	FACILITY
①	Ventilation Raise
②	Temporary Development Rock Storage Area
③	Gold Axe Heritage Conservation Area
④	Water Well
⑤	Compressor / Fuel Storage
⑥	Temporary Ore Stockpile
⑦	Mine Effluent Water Treatment
⑧	Topsoil Stockpile
⑨	Backfill Storage
⑩	Main Portal
⑪	Shop
⑫	Backfill Plant
⑬	Cement Storage
⑭	Mine Offices/Facilities
⑮	Parking Lot and Security Gates
⑯	Water Tank

Note: Surface cross sections shown on Figure 9.

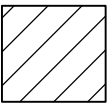


PROJECT		BUCKHORN MOUNTAIN PROJECT OKANOGAN CO., WASHINGTON	
TITLE		MINE SITE DETAIL	
	CROWN RESOURCES	FILE No.	0232002A043
		SCALE AS SHOWN	REV. A
		FIGURE 2	





## LEGEND



PROPOSED LIMITS OF BACKFILL  
QUARRY

300 0 300 600  
1" = 300' Feet

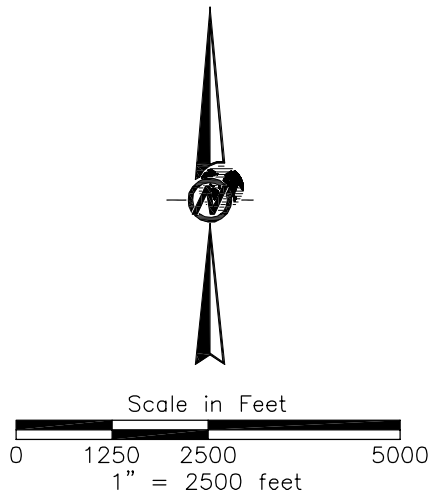
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TITLE	BACKFILL QUARRY SITE MAP		
	023-2002	FILE No.	0232002A045
	SCALE	AS SHOWN	REV. B
FIGURE 3			


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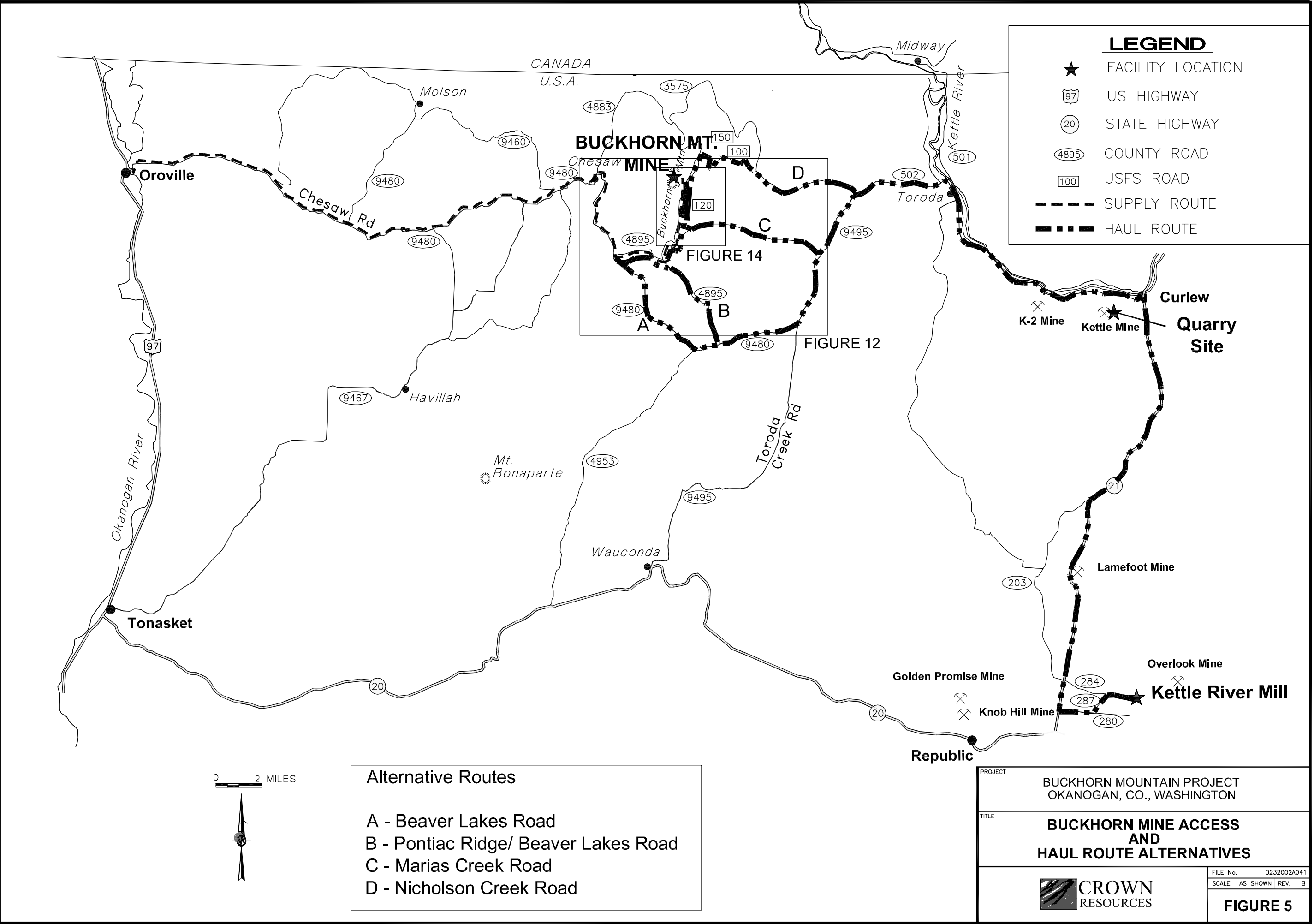


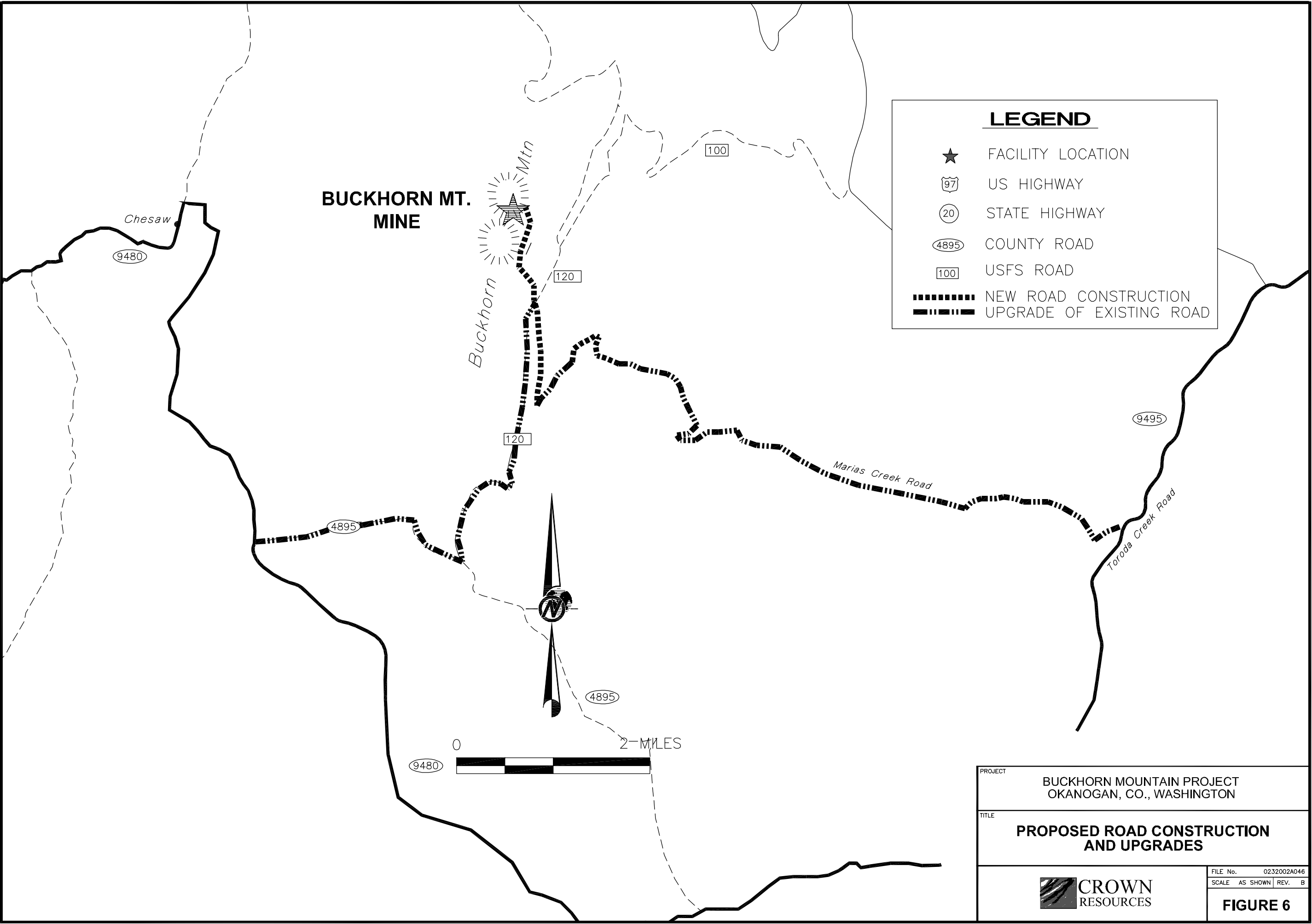
## LEGEND

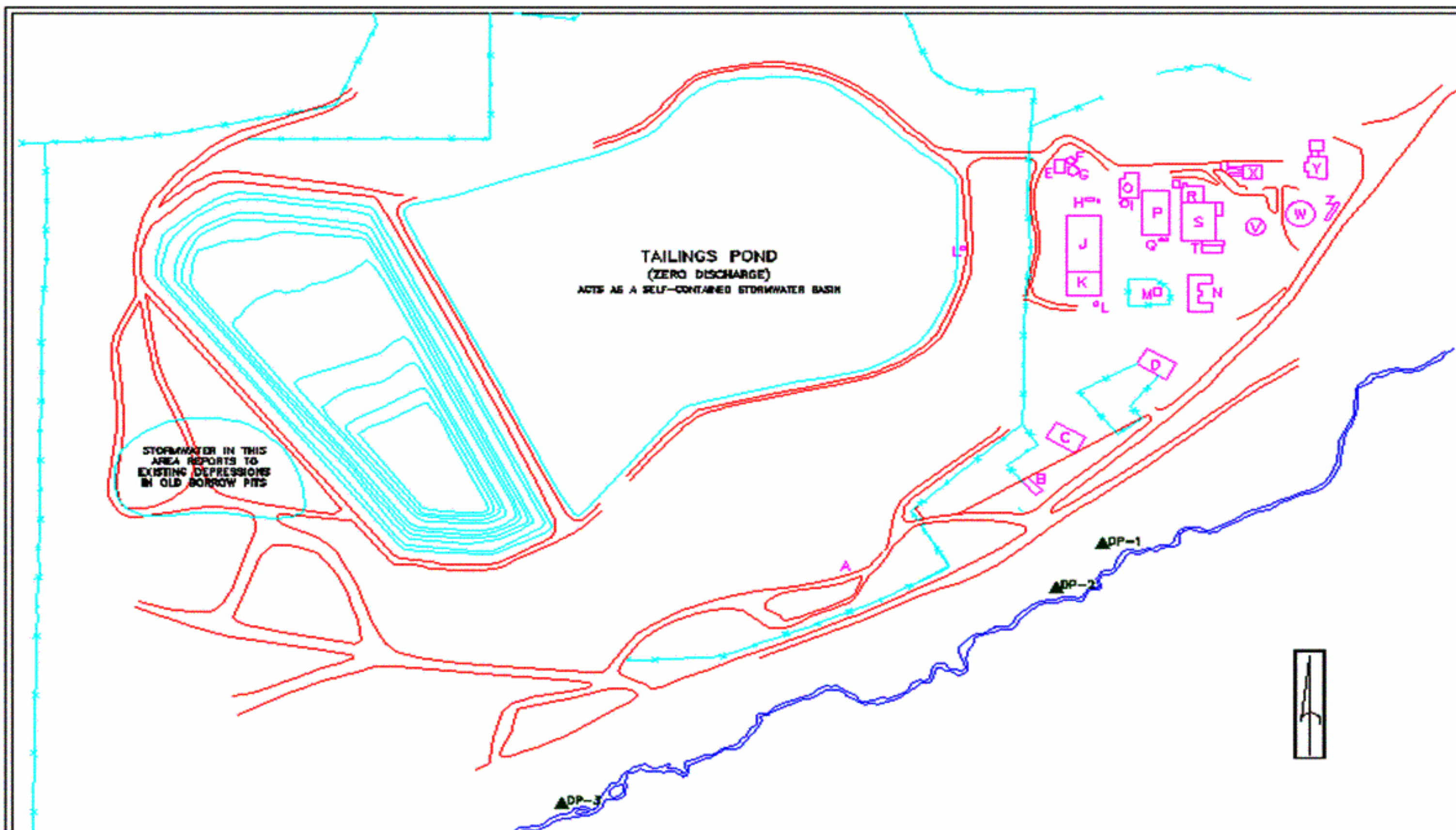
- STATE LAND
- BLM LAND
- FOREST SERVICE LAND
- CROWN RESOURCES SURFACE RIGHTS
- PRIVATE LAND
- FACILITY
- ORE BODY
- CROWN RESOURCES UNPATENTED CLAIMS



PROJECT	BUCKHORN MOUNTAIN PROJECT OKANOGAN CO., WASHINGTON		
TITLE	LAND STATUS MAP		
 CROWN RESOURCES	FILE No. 0232002A012		
	SCALE	AS SHOWN	REV. B
FIGURE 4			







- |                       |                          |                      |                        |
|-----------------------|--------------------------|----------------------|------------------------|
| A) BONE YARD          | H) SULFUR DIOXIDE        | O) REAGENT           | U) LAND SEA CONTAINER  |
| B) GUARD HOUSE        | I) LIME SILO             | P) PREAERATION LEACH | V) FINE ORE BIN        |
| C) SEPTIC FIELD       | J) SHOP/WAREHOUSE        | AND CIL TANKS        | W) EMERGENCY STOCKPILE |
| D) LOWER WAREHOUSE    | K) STORAGE YARD          | Q) LIQUID OXYGEN     | X) SCREENING           |
| E) PUMP HOUSE         | L) DRAINAGE PUMP         | R) REFINERY          | Y) CRUSHER             |
| F) RECLAIM WATER TANK | M) MAIN SUB STATION      | S) MILL              | Z) PROPANE TANKS       |
| G) FIRE WATER TANK    | N) ADMINISTRATION OFFICE | T) DRY               |                        |

**LEGEND**

DIAGRAM OF  
DIRECTION OF  
STORMWATER FLOW

▲ DP-1,2,3 STORMWATER  
ENCHARGE POINTS

SCALE 0 100 200 300

**KINROSS COLD  
KETTLE RIVER  
MILL SITE  
REPUBLIC, WASHINGTON**

**FIGURE 7**

STORMWATER FEATURES BY M.E.C. MAY 2006